110.1 - Foods and Beverages (liquid and powder forms)

These SRMs are for validation of analytical procedures and calibration of apparatus used in the analysis of trace elements and other analytes in foods and related products.

Technical Contact for SRMs: 1570a and 1577b rolf.zeisler@nist.gov
Technical Contact for SRMs: 1549, 1566b, 1568a, 2384, 2385 and 3276 katherine.sharpless@nist.gov

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			Element (Concentrations are in mg/kg, unless noted by a single asterisk for mass fraction, in %)														
SRM	Description	Unit of Issue	Aluminum	Antimony	Arsenic	Barium	Bromine	Boron	Cadmium	Calcium	Cesium	Chlorine	Chromium	Cobalt	Copper	Fluorine	Iodine
1549	Non-Fat Milk Powder	100 g	(2)	(0.00027)	(0.0019)		(12)		0.0005	1.30*		1.09*	0.0026	(0.0041)	0.7	(0.20)	3.38
1566b	Oyster Tissue	25 g	197.2	(0.011)	7.65	(8.6)		(4.5)	2.48	0.0838*		0.514*		0.371	71.6		
1567a	Wheat Flour	80 g	5.7		(0.006)		(6)		0.026	0.0191*		(565)		(0.006)	2.1		(0.0009)
1568a	Rice Flour	80 g	4.4	(0.0005)	0.29		(8)		0.022	0.011*		(300)		(0.018)	2.4		(0.009)
1570a	Trace Elements in Spinach Leaves	60 g	310		0.068			37.6	2.89								
1577c	Bovine Liver	20 g		(0.00313)	0.0196				0.0970	131	(0.0217)	(0.287*)	0.300		275.2		
1953	Organic Contaminants in Non-Fortified Human Milk	5 vials x 5 mL								(257)					(0.268)		
1954	Organic Contaminants in Fortified Human Milk	5 vials x 5 mL								(257)					(0.268)		
2384	Baking Chocolate	5 X 91 g								840					23.2		
2385	Slurried Spinach	4x70 g								624					0.9		
3276	Carrot Extract in Oil	5 ampoules															
3278	Tocopherols in Edible Oils	5 x 1 mL															

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			Element (Concentrations are in mg/kg, unless noted by a single asterisk for mass fraction, in %)														
SRM	Description	Unit of Issue	Iron	Hydrogen	Lead	Lithium	Magnesium	Manganese	Mercury	Molybdenum	Nickel	Nitrogen	Phosphorus	Potassium	Rubidium	Selenium	Silicon
1549	Non-Fat Milk Powder	100 g	1.78		0.019		0.120*	0.26	0.0003	(0.34)			1.06*	1.69*	(11)	0.11	(
1566b	Oyster Tissue	25 g	205.8	(7.2)	0.038		0.1085*	18.5	0.0371		1.04	(7.6)*		0.652*	3.262	2.06	
1567a	Wheat Flour	80 g	14.1		(< 0.020)		0.040*	9.4	(0.0005)	0.48			0.134*	0.133*	0.68	1.1	
1568a	Rice Flour	80 g	7.4		(< 0.010)		0.056*	20.0	0.0058	1.46	(0.16)		0.153*	0.1280*	6.14	0.38	
1570a	Trace Elements in Spinach Leaves	60 g			(0.20)			75.9	0.030		2.14	(6.06)*				0.117	
1577c	Bovine Liver	20 g	197.94	7.35*	0.0628	(12)	620	10.46	(0.00536)	3.30	0.0445	(10.30*)	(1.175*)	1.023*	(35.3)	2.031	(6)
1953	Organic Contaminants in Non-Fortified Human Milk	5 vials x 5 mL	(0.194)				(32.4)	(0.040)	(0.000101)				(135)	(462)			
1954	Organic Contaminants in Fortified Human Milk	5 vials x 5 mL	(0.194)				(32.4)	(0.040)	(0.000101)				(135)	(462)			
2384	Baking Chocolate	5 X 91 g	132				2570	20.3					3330	8200			
2385	Slurried Spinach	4x70 g	17				368	3.8					323.7	3650			
3276	Carrot Extract in Oil	5 ampoules															
3278	Tocopherols in Edible Oils	5 x 1 mL															

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(Z,Z,Z)-9,12,15-Octadecatrienoic Acid (C18:3 n-3)(Linolenic Acid)	Eicosanoic Acid (C20:1)(Arachidic Acid)	(Z)-11-Eicosenoic Acid (C20:1 n-9)(Gondoic Acid)
0.816	0.0578	0.353

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			Element (Concentrations are in mg/kg, unless noted by a single asterisk for mass fraction, in %)														
SRM	Description	Unit of Issue	Silver	Sodium	Strontium	Sulfur	Tellurium	Thorium	Tin	Uranium	Vanadium	Zinc	Carotenoids and Tocopherols(Concentrations in mass fraction in ug/g	total cis-ß-Carotene	total ß-Carotene	a-Tocopherol	ß-Tocopherol
1549	Non-Fat Milk Powder	100 g	(< 0.0003)	0.497*		0.351*			(< 0.02)			46.1					
1566b	Oyster Tissue	25 g	0.666	0.3297*	(6.8)	0.6887*		0.0367	(0.031)	(0.2550)	0.577	1424					
1567a	Wheat Flour	80 g		6.1		0.165*				(0.0003)	(0.011)	11.6					
1568a	Rice Flour	80 g		6.6		0.120*	(< 0.002)		(0.0033)	(0.0003)	(0.007)	19.4					
1570a	Trace Elements in Spinach Leaves	60 g			55.6	(0.46)*		0.048		(0.155)	0.57	82					
1577c	Bovine Liver	20 g	0.0059	0.2033*	0.0953	0.749*			(0.0047)		0.00817						
1953	Organic Contaminants in Non-Fortified Human Milk	5 vials x 5 mL		(127)													
1954	Organic Contaminants in Fortified Human Milk	5 vials x 5 mL		(127)													
2384	Baking Chocolate	5 X 91 g		40								36.6					
2385	Slurried Spinach	4x70 g		47								8.4					
3276	Carrot Extract in Oil	5 ampoules												(13.9)	(35.5)		
3278	Tocopherols in Edible Oils	5 x 1 mL														290.1	11.38

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			Element (Concentrations are in mg/kg, unless noted by a single asterisk for mass fraction, in %)											
SRM	Description	Unit of Issue	y-Tocopherol	8-Tocopherol	trans-a-Carotene	trans-ß-Carotene	Selected Fatty Acids (as Triglycerides) (Concentrations expressed in mass fraction %)	Hexadecanoic Acid (C16:0)(Palmitic Acid)	(Z)-9-Hexadecenoic Acid (C16:1 n-7)(Palmitoleic Acid)	Heptadecanoic Acid (C17:0)	Octadecanoic Acid (C18:0)(Stearic Acid)	(Z)-9-Octadecenoic Acid(C18:1 n-9)	(Z)-11-Octadecenoic Acid (C18:1 n-7)(Vaccenic Acid)	(Z,Z)-9,12-Octadecenoic Acid (C18:2 n-6)(Linoleic Acid)
1549	Non-Fat Milk Powder	100 g												
1566b	Oyster Tissue	25 g												
1567a	Wheat Flour	80 g												
1568a	Rice Flour	80 g												
1570a	Trace Elements in Spinach Leaves	60 g												
1577c	Bovine Liver	20 g												
1953	Organic Contaminants in Non-Fortified Human Milk	5 vials x 5 mL												
1954	Organic Contaminants in Fortified Human Milk	5 vials x 5 mL												
2384	Baking Chocolate	5 X 91 g												
2385	Slurried Spinach	4x70 g												
3276	Carrot Extract in Oil	5 ampoules	443	373	(3.14)	(21.4)		1.36	0.0147	0.0213	1.14	3.68	0.519	6.64
3278	Tocopherols in Edible Oils	5 x 1 mL	111.5	28.8										

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